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Substitute for form 146, USPTO

**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Sheet 01

of 17

Complete if Known

Application Number	10/810,948
Filing Date	March 25, 2004
First Named Inventor	Ismail Lakkis
Art Unit	2611
Examiner Name	Lawrence B Williams

Attorney Docket Number 00282

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
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		US- 4001693	01-1977	Stackhouse et al.	
		US- 4039972	08-02-1977	Scholten et al.	
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		US- 5235326	08-10-1993	Beigel et al.	
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FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁶
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				

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Complete if Known**INFORMATION DISCLOSURE
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Sheet 02 of 17

Application Number	10/810,948
Filing Date	March 25, 2004
First Named Inventor	Ismail Lakkis
Art Unit	2611
Examiner Name	Lawrence B Williams
Attorney Docket Number	00282

U. S. PATENT DOCUMENTS

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Sheet 03

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Application Number	10/810,948
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First Named Inventor	Ismail Lakkis
Art Unit	2611
Examiner Name	Lawrence B Williams

Attorney Docket Number 00282

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Sheet 04

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Filing Date	March 25, 2004
First Named Inventor	Ismail Lakkis
Art Unit	2611
Examiner Name	Lawrence B Williams

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Sheet 05 of 17

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Art Unit	2611
Examiner Name	Lawrence B Williams

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		US- 6947498	09-2005	Reed	

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Sheet 08 of 17

Application Number	10/810,948
Filing Date	March 25, 2004
First Named Inventor	Ismail Lakkis
Art Unit	2611
Examiner Name	Lawrence B Williams

Attorney Docket Number 00282

U. S. PATENT DOCUMENTS					
Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
		US- 6952444	10-2005	Segal et al.	
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Sheet 09

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Sheet 10 of 17

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Sheet 11 of 17

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		Number-Kind Code ² (if known)			
		US- 2004/0070433	04-2004	Adams et al.	
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Filing Date March 25, 2004
(Use as many sheets as necessary)				First Named Inventor Ismail Lakkis
				Art Unit 2611
				Examiner Name Lawrence B Williams
Sheet	12	of	17	Attorney Docket Number 00282

NON PATENT LITERATURE DOCUMENTS				
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.		T ²
		AIJANEN, JUSSI et al. "Frame Configuration Impact to the Performance of ULTRA TDD System" University of Jyvaskyla, Dep. of Mathematical Information Technology, pp. 1-5.		
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				Examiner Name	Lawrence B Williams
Sheet	13	of	17	Attorney Docket Number	00282

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				First Named Inventor
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INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(Use as many sheets as necessary)</i>				Application Number	10/810,948
Sheet	15	of	17	Filing Date	March 25, 2004
				First Named Inventor	Ismail Lakkis
				Art Unit	2611
				Examiner Name	Lawrence B Williams
				Attorney Docket Number	00282

NON PATENT LITERATURE DOCUMENTS					
Examiner Initials*	Cite No. ¹	Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published.			T ²
		GALLI, Optimal Non-Linear MMSE Channel Estimation for Broadband Wireless TDMA Systems and Necessity of Soft Decisions, Telcordia Technologies Inc, Morristown, New Jersey, 7 pages.			
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		RYAN, An Introduction to LDPC Codes, University of Arizona, Tucson, Arizona, August 19, 2003, 23 pages.			
		SALGADO et al., Spectrum Sharing Through Dynamic Channel Assignment for Open Access to Personal Communications Services, Proc. of IEEE Intl. Communications Conference (ICC), June 1995, Pages 417-422.			

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				First Named Inventor	Ismail Lakkis
				Art Unit	2611
				Examiner Name	Lawrence B Williams
Sheet	16	of	17	Attorney Docket Number	00282

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		O'DONNELL, et al., An Integrated, Low-Power, Ultra-Wideband Transceiver Architecture for Low-Rate Indoor Wireless Systems, IEEE CAS Workshop on Wireless Communications and Networking, September 4-5th, 2002, 23 pages, Pasadena.			
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		RIHACCZEK et al., "Range Sidelobe Suppression for Barker Codes" IEEE Transactions on Aerospace and Electronic Systems", Vol. 7, No. 6, Nov. 1971, pgs. 1087 - 1092.			
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Substitute for form 1449/PTO				Application Number
				10/810,948
INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Filing Date
				March 25, 2004
(Use as many sheets as necessary)				First Named Inventor
				Ismail Lakkis
				Art Unit
				2611
				Examiner Name
				Lawrence B Williams
Sheet	17	of	17	Attorney Docket Number
				00282

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		VERDU, Wireless Bandwidth in the Making, Multiple Access for Broadband Wireless Networks, IEEE Communications Magazine, July 2000, Pages 53-58.		
		SCHOBER et al., Adaptive Noncoherent DFE for MDPSK Signals Transmitted over ISI Channels, IEEE Transactions on Communications, Vol. 48, No. 7, July 2000, Pages 1128-1140.		
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		ZHOU et al., Space-Time Coding with Maximum Diversity Gains Over Frequency-Selective Fading Channels, IEEE Signal Processing Letters, Vol. 8, No. 10, October 2001, Pages 269-272.		

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Sheet 01

of 17

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Application Number	10/810,948
Filing Date	March 25, 2004
First Named Inventor	Ismail Lakkis
Art Unit	2611
Examiner Name	Lawrence B Williams

Attorney Docket Number 00282

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
		Number-Kind Code ² (if known)			
		US- 3568148	03-1971	Clark, jr.	
		US- 4001693	01-1977	Stackhouse et al.	
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		US- 5389939	02-14-1995	Tang et al.	

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Sheet 02 of 17

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First Named Inventor	Ismail Lakkis
Art Unit	2611
Examiner Name	Lawrence B Williams

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		Number-Kind Code ² (if known)			
		US- 5396110	03-07-1995	Houston	
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Sheet 03

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Application Number	10/810,948
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First Named Inventor	Ismail Lakkis
Art Unit	2611
Examiner Name	Lawrence B Williams

Attorney Docket Number 00282

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		US- 5822359	10-1998	Bruckert et al.
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		US- 6081562	06-2000	He et al.
		US- 6078607	06-20-2000	Monroe et al.

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Sheet 04

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Art Unit	2611
Examiner Name	Lawrence B Williams

Attorney Docket Number 00282

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		US- 6108317	08-2000	Jones et al.	
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		US- 6301681	10-09-2001	Zongbo et al.	
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		US- 6317411	11-13-2001	Whinnet et al.	

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Sheet 05

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		US- 6032033	02-2000	Mprros et al.	
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Examiner Initials*	Cite No. ¹	Foreign Patent Document	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T ⁶
		Country Code ³ -Number ⁴ -Kind Code ⁵ (if known)				

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**INFORMATION DISCLOSURE
STATEMENT BY APPLICANT**

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Sheet 06

of 17

Complete if Known

Application Number	10/810,948
Filing Date	March 25, 2004
First Named Inventor	Ismail Lakkis
Art Unit	2611
Examiner Name	Lawrence B Williams

Attorney Docket Number 00282

U. S. PATENT DOCUMENTS

Examiner Initials*	Cite No. ¹	Document Number	Publication Date MM-DD-YYYY	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear
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Sheet 07

of 17

Application Number	10/810,948
Filing Date	March 25, 2004
First Named Inventor	Ismail Lakkis
Art Unit	2611
Examiner Name	Lawrence B Williams

Attorney Docket Number 00282

U. S. PATENT DOCUMENTS					
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Sheet 08 of 17

Application Number	10/810,948
Filing Date	March 25, 2004
First Named Inventor	Ismail Lakkis
Art Unit	2611
Examiner Name	Lawrence B Williams
Attorney Docket Number	00282

U. S. PATENT DOCUMENTS

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Sheet 09 of 17

Application Number	10/810,948
Filing Date	March 25, 2004
First Named Inventor	Ismail Lakkis
Art Unit	2611
Examiner Name	Lawrence B Williams
Attorney Docket Number	00282

U. S. PATENT DOCUMENTS

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Application Number	10/810,948
Filing Date	March 25, 2004
First Named Inventor	Ismail Lakkis
Art Unit	2611
Examiner Name	Lawrence B Williams

Sheet 10 of 17

Attorney Docket Number 00282

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Sheet 11 of 17

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Art Unit	2611
Examiner Name	Lawrence B Williams

Attorney Docket Number 00282

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT				Filing Date March 25, 2004
(Use as many sheets as necessary)				First Named Inventor Ismail Lakkis
				Art Unit 2611
				Examiner Name Lawrence B Williams
Sheet	12	of	17	Attorney Docket Number 00282

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INFORMATION DISCLOSURE STATEMENT BY APPLICANT			Complete if Known	
(Use as many sheets as necessary)			Application Number	10/810,948
			Filing Date	March 25, 2004
			First Named Inventor	Ismail Lakkis
			Art Unit	2611
			Examiner Name	Lawrence B Williams
Sheet	13	of	17	Attorney Docket Number
00282				

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